

EVALUATION REPORT OF GAS PIPELINE CONSTRUCTION

Name of Operator:		
H.Q. Address:		Unit Name and Address:
Co. Official:		Phone No.:
Phone No.:		Fax No.:
Fax No.:		Emergency Phone No.:
Emergency Phone No.:		Unit Record ID#:
Operator ID#:		Inspection Record ID#:
Persons Interviewed	Titles	Phone No.
OPS Representative(s):		Date(s):
Company's Construction Maps (copies for Region Files):		
Description of Description of System:		

EVALUATION REPORT OF GAS PIPELINE CONSTRUCTION

Unless otherwise noted, all code references are to Part 192.

S - Satisfactory U - Unsatisfactory N/A - Not Applicable N/C - Not Checked

PART 192 DESIGN & CONSTRUCTION						
.51	MATERIALS SPECIFICATIONS		S	U	N/A	N/C
	.55	Qualification of Pipe # Manufacturer: # Manufacturing Standard: # Pipe Grade: # Outside Diameter (D): # Wall Thickness (t): # Pipe Wt. - lbs/ft: # Type of Longitudinal Seam: # Specified Min. Yield Strength: # Joint Design - Bevel: # External Coating: # Internal Coating: # Minimum Joint Length: # Footage or Miles:				
	.55	Does the steel pipe meet one of the API or ASTM listed specifications?				
	.63(a)	Are pipe, valves, and fittings properly marked for identification?				
	.63(c)	Were pipe, valves, and fittings marked with other than field die stamping?				
.101	PIPE DESIGN					
	.105(a)	Was the pipeline designed in accordance with this formula: $P = (2St/D) \times F \times E \times T$				
	.113	Is the longitudinal joint factor (E) for steel pipe equal to 1? (See table)				
	.115	Is the temperature derating factor (T) for steel pipe equal to 1? (See table)				
.141	DESIGN of PIPELINE COMPONENTS					
	.145	Does each valve meet minimum requirements, or the equivalent, of API 6A, API 6D, MSS SP70, MSS SP71, or MSS SP78?				
	.147	Does each flange or flange accessory meet the minimum requirements of ASME/ANSI 16.5, MSS SP44, or ASME/ANSI B16.25 , or equivalent?				
	.149	Are steel butt welded fittings rated at or above the pressure and temperature as the pipe?				
	.159	Is the pipeline designed with enough flexibility to prevent thermal expansion or contraction from causing excessive stresses in the pipe or component?				
	.161(d)	For a pipeline to operate at 50% of SMYS, are structural supports not welded directly to the pipe, but to a member that completely encircles the pipe?				
.221	WELDING					
	.229	Were welders qualified by radiography and is there a qualification record available which meets the requirements of Section 6, API Std. 1104?				
	.229(a)	Are all welders on compressor station piping and components qualified by means other than nondestructive testing?				
	.229(b)	Has the welder welded with this same process and has a weld been tested and found acceptable within the last 6 months?				
	.231	Is the welding operation protected from the weather conditions that could impair the quality of the completed weld?				

EVALUATION REPORT OF GAS PIPELINE CONSTRUCTION

Unless otherwise noted, all code references are to Part 192.

S - Satisfactory U - Unsatisfactory N/A - Not Applicable N/C - Not Checked

.221	WELDING (Cont.)		S	U	N/A	N/C
	.235	Are welding surfaces clean, free of foreign material, and aligned in accordance with the qualified welding procedure?				
	.241	Are inspectors performing visual inspection to check for adherence to the welding procedure and the acceptability of welds as per Section 6, API Std. 1104, except for Subsection 6.9 for depth of undercutting adjacent to the root bead?				

SECTION 6 - ACCEPTANCE STANDARDS FOR NONDESTRUCTIVE TESTING

Discontinuity		Individual Length	Cumulative in 12 inches
Type	Abbrev.		
Inadequate Penetration - weld root	IP	1"	1"
Inadequate Penetration - due to high/low	IPD	2"	3"
Incomplete Fusion - root or top of joint	IF	1"	1"
Incomplete Fusion - due to cold lap	IFD	2"	2"
Burn Through	BT	1/4"	1/2"
Elongated Slag Inclusions - wagon tracks	ESIs	1/16" - Width	2'
		2" - Length	
Isolated Slag Inclusions	ISIs	C" - Width	4 or less
		1/2" - Length	C" - Wide
Porosity - individual or scattered	P	C"	25 % of t
Porosity - cluster	CP	1/2" - Diameter	1/2" - Length
		1/16" - Individual	
Porosity - wormhole		C"	25% of t
Porosity - hollow bead	HB	1/2"	2"
Cracks	C	5/32" or less	5/32" or less
Internal Undercutting	IU	2" - Length	2'
External Undercutting	EU	2" - Length	2"

.221	WELDING (Cont.)		S	U	N/A	N/C
	.243(a)	Is a detailed written NDT procedure established and qualified?				
	.243(b)	Are there records to qualify procedures?				
	.243(c)	Is the radiographer trained and qualified? (Level II or better)				
	.243(d)	Are the following percentages of each days field butt welds nondestructively tested:				
		(1) 10% in Class 1 locations.				
		(2) 15% in Class 2 locations.				
		(3) 100% in Class 3 and 4 locations, river crossings, within railroad or public highway ROWs, tunnels, bridges, overhead road crossings: however, if impracticable may test not less than 90% .				
		(4) 100% at pipeline tie-ins.				
	.243(f)	Do the radiograph records and daily reports show:				
		1. Number of welds made.				
		2. Number of welds tested.				
		3. Number of welds rejected.				
		4. Disposition of rejected welds.				
		5. Is there a correlation of welds and radiographs to a bench mark? (Engineering station or survey marker)				

EVALUATION REPORT OF GAS PIPELINE CONSTRUCTION

Unless otherwise noted, all code references are to Part 192.

S - Satisfactory U - Unsatisfactory N/A - Not Applicable N/C - Not Checked

		S	U	N/A	N/C
.221	WELDING (Cont.)				
	.245(a) 1. Are cracks longer than 8% of the weld length removed?				
	2. For each weld that is repaired, is the defect removed down to clean metal and is the pipe preheated if conditions demand it?				
	.245(b) 1. Are the repairs inspected to insure acceptability?				
	2. If additional repairs are required, are they done in accordance with qualified written welding procedures to assure minimum mechanical properties are met?				
.301	CONSTRUCTION REQUIREMENTS				
	.303 Are comprehensive written construction specifications available and adhered to?				
	.305 Are inspections performed to check adherence to the construction specifications?				
	.307 Is material being visually inspected at the site of installation to insure against damage that could impair its serviceability?				
	.309(a) Are any defects or damage that impairs the serviceability of a length of steel pipe such as a gouge, dent, groove, or arc burn repaired or removed?				
	.309(c) If repairs are made by grinding, is the remaining wall thickness in conformance with the tolerances in the pipe manufacturing specifications or the nominal wall thickness required for the design pressure of the pipe?				
	.313(b) If a circumferential weld is permanently deformed during bending, is the weld nondestructively tested.				
	.319(a) When pipe is placed in the ditch, is it installed so as to fit the ditch, minimize stresses, and protect the pipe coating from damage?				
	.319(b) Does backfill provide firm support under the pipe and is the ditch backfilled in a manner that prevents damage to the pipe and coating from equipment or the backfill material?				
	.461(c) Is the external protection coating inspected (by jeeping, etc.) prior to lowering the pipe into the ditch?				
	.325(a) Is there 12 inches clearance between the pipeline and any other underground structure? If 12 inches cannot be attained, are adequate provisions made to protect the pipeline from damage that could result from the proximity of the other structure?				
	.327(a) 1. Is pipe in a Class 1 location installed with 30 inches of cover in normal soil , or 24 inches of cover in consolidated rock ?				
2. Is pipe in Class 2, 3, and 4 locations, drainage ditches of public roads and railroad crossings, installed with 36 inches of cover in normal soil or 24 inches of cover in consolidated rock?					
3. Does pipe installed in a river or harbor have 48 inches of cover in soil or 24 inches of cover in consolidated rock ?					
4. If the above cover cannot be attained, is additional protection provided to withstand anticipated external loads?					
.451	CORROSION REQUIREMENTS				
	.455(a) (1) Does the pipeline have an effective external coating and does it meet the coating specifications?				
	(2) Is a cathodic protection system installed or being provided for?				
	.471(a) Are test leads mechanically secure and electrically conductive?				
	.417(b) Are test leads attached to the pipe by cadwelding or other process so as to minimize stress concentration on the pipe?				
	.471(c) Are bare test lead and the connection to the pipe coated?				
.501	TESTING REQUIREMENTS				
	.503(A) (1) Is a hydrostatic pressure test planned to substantiate the MAOP?				
	(2) If the pipeline has been hydrostatically tested, have all potentially hazardous leaks been located and eliminated?				

EVALUATION REPORT OF GAS PIPELINE CONSTRUCTION

Unless otherwise noted, all code references are to Part 192.

S - Satisfactory U - Unsatisfactory N/A - Not Applicable N/C - Not Checked

.501	TESTING REQUIREMENTS (Cont.)		S	U	N/A	N/C
	.505(a)	1. Is there a specified hydrostatic pressure testing procedure?				
		2. Is the specified test pressure equal to: 1.1 x MAOP for Class 1 locations, 1.25 x MAOP for Class 2 locations, and 1.5 x MAOP for Class 3 and 4 locations?				
	.505(c)	For pipelines which operate at 30% of more of SMYS , is the minimum test duration for the pipeline at least 8 hours? (Strength Test)				
	.505(e)	Is the minimum test duration for pretested fabricated units and short sections of pipe at least 4 hours?				
	.515(a)	Does the operator take every reasonable precaution to protect the general public and all personnel during the test?				
	.515(b)	Does the operator insure that the test medium is disposed of in a manner that will minimize damage to the environment?				
	.517	Do the test records include the following:				
		(a) Operator's name, name of operator's employee responsible for making the test, and the name of the test company used.				
		(b) Test medium used.				
		(c) Test pressure.				
		(d) Test duration.				
		(e) Pressure recording charts, or other record of pressure readings.				
		(f) Elevation variations, whenever significant for the particular test.				
		(g) Leaks and failures noted and their disposition.				